

Serial No. 10/773,038  
Atty. Doc. No. 2002P10620US

Amendments to the Claims:

Please amend the claims as shown. Applicants reserve the right to pursue any of the original unamended claims presented in this application at a later date in one or more continuing applications.

1. (currently amended) A steam turbine rotor extending along an axial extent comprising:

an outer side adjoining an outer space arranged to receive a main flow of a fluid working medium;

a first location arranged along the outer side, at which a first blade is held; and  
at least one integrated passage extending continuously at least between a first region arranged in front of the first location and a second region arranged behind the first location,

wherein a cooling medium is provided and guided at a pressure that is modified as a function of a pressure of the main flow.

2. (previously presented) The steam turbine rotor as claimed in claim 1, wherein a second location arranged along the outer side, at which a second blade is held, the second location arranged behind the first location along the axial extent and the passage extending continuously at least between a first region arranged in front of the first location and a second region arranged behind the second location.

3. (previously presented) The steam turbine rotor as claimed in claim 2, wherein a number of further locations, at each of which a blade is held, are arranged between the first location and the second location.

4. (previously presented) The steam turbine rotor as claimed in claim 1, wherein the at least one passage is part of a combined passage system which extends along the axial extent.

5. (previously presented) The steam turbine rotor as claimed in claim 1, wherein the at least one passage is part of a combined passage system which has an external feed which is provided for the incoming flow of cooling medium.

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6. (previously presented) The steam turbine rotor as claimed in claim 1, wherein the at least one passage is part of a combined passage system which includes a channel which at least partially encircles a circumferential extent of the rotor.

7. (previously presented) The steam turbine rotor as claimed in claim 1, wherein the first region has a first opening to the main flow.

8. (previously presented) The steam turbine rotor as claimed in claim 1, wherein the second region has a second opening to the main flow.

9. (previously presented) The steam turbine rotor as claimed in claim 1, wherein the outer side of the rotor is formed by a shielding plate which can rotate with the rotor.

10. (previously presented) The steam turbine rotor as claimed in claim 1 to 9, wherein a shielding plate which can rotate with the rotor is held by a blade.

11. (previously presented) The steam turbine rotor as claimed in claim 9 wherein a shield for the rotor shaft with respect to the main flow of the steam is at least partially formed by a blade root.

12. (previously presented) The steam turbine rotor as claimed in claim 1, wherein the passage leads through a blade, in particular through a blade root.

13. (currently amended) The steam turbine rotor as claimed in claim 1, further comprising a groove at a blade root, which groove is part of the rotor passage.

14. (previously presented) The steam turbine rotor as claimed in claim 1, further comprising a bore through a single blade root and/or a bore through two adjacent blade roots, which bore is part of the passage.

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15. (currently amended) The steam turbine rotor as claimed in claim 1, further comprising a channel in a main blade part, which channel is connected to the passage and permits axial flow directly from the first region to the second region.

16. (previously presented) The steam turbine rotor as claimed in claim 1, wherein a thermally insulating coating made from a material which has a lower heat conduction coefficient than the base material of the blade is provided on a blade surface.

17. (currently amended) A steam turbine having a steam turbine rotor extending along an axial direction, the steam turbine rotor comprising:

an outer side adjoining an outer space arranged to receive a main flow of a fluid working medium;

a first location arranged along the outer side, at which a first blade is held; and  
at least one integrated passage extending continuously at least between a first region arranged in front of the first location and a second region arranged behind the first location,  
wherein a cooling medium is supplied at a temperature and/or in an amount which is/are modified as a function of a temperature of the main flow.

18. (currently amended) A method for actively cooling a steam turbine rotor extending along an axial extent and having an outer side, which adjoins an outer space which is intended to receive a main flow of a fluid working medium and having a first location along the outer side, at which a first blade is held, comprising:

providing a fluid cooling medium; and  
guiding the fluid cooling medium continuously within the steam turbine rotor along the axial extent, at least between a first region arranged in front of the first location and a second region arranged behind the first location,

wherein the method is used for starting up and/or running down a steam turbine.

19. (previously presented) The method for actively cooling a steam turbine rotor as claimed in claim 18, wherein the steam turbine rotor has a second location along the outer side, at which a second blade is held, the second location arranged behind the first location along the

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axial extent, and the fluid cooling medium guided continuously at least between a first region arranged in front of the first location and a second region arranged behind the second location.

20. (previously presented) The method for actively cooling a steam turbine rotor as claimed in claim 19, further comprising:

guiding the cooling medium in a combined passage system along the axial extent over the first location and the second location and a number of intervening further locations, at each of which a blade is held.

21. (previously presented) The method for actively cooling a steam turbine rotor as claimed in claim 18, further comprising:

feeding the cooling medium to the steam turbine rotor from the outside.

22. (previously presented) The method for actively cooling a steam turbine rotor as claimed in claim 18, further comprising:

guiding the cooling medium at a pressure which exceeds a pressure of the main flow.

23. (previously presented) The method for actively cooling a steam turbine rotor as claimed in claim 18, further comprising:

guiding the cooling medium at a pressure which is modified as a function of a pressure of the main flow.

24. (previously presented) The method for actively cooling a steam turbine rotor as claimed in claim 18, further comprising:

supplying the cooling medium at a temperature and/or in an amount which is/are modified as a function of a temperature of the main flow.

25. (canceled)